

REMARKS

Claims 1-40 are pending in this application. By this Amendment, claims 5, 6, 23, 24 and 32-34 are amended. No new matter is added. Reconsideration of the application in view of the above amendments and the following remarks is respectfully requested.

Applicants appreciate the courtesies shown to Applicants' representative by Examiner Pham in the February 20, 2006 telephone interview. Applicants' separate record of the substance of the interview is incorporated into the following remarks.

I. §102 Rejection of Claims 1-6, 9-20 and 23-40

A. The Office Action rejects claims 1-6, 9-20 and 23-40 under 35 U.S.C. §102(b) over U.S. Patent No. 6,277,176 to Tang et al. ("Tang"). This rejection is respectfully traversed.

Claim 1 recites a method for filtering a gas-flow, the method comprising, (a) receiving the gas-flow through at least one of a duct and a housing containing a non-fibrous filter, (b) placing the filter in motion, and (c) impacting particulate matter suspended within the gas-flow with the filter, as a result of placing the filter in motion, wherein upon impact the particulate matter is removed from the gas-flow.

The Office Action asserts that Tang teaches, at col. 6, lines 28-29, that the air filter may be in the form of a general planar element such as a fan blade, or a fan blade insert, and further asserts that such a blade or fan blade insert is a non-fibrous filter.

Applicants respectfully submit that the Office Action's interpretation of col. 6, lines 28-29 is mistaken. For example, the paragraph cited by the Office Action states that "[t]he air filter element can be in the form of a general planar element such as a fan blade or a fan blade insert. . . , " but in the very same paragraph at col. 6, lines 32-37, Tang clarifies that the "The air filter element generally is formed by air filter media (e.g., of a fibrous filter) and support elements. The fibrous filter can be one or multiple layers of fibrous filter web

materials which filter web may have protective cover layers on one or both faces. . . ."

Therefore, Applicants respectfully assert that the blade-shaped filters are, in fact, made of a fibrous filter material, contrary to the assertion made in the Office Action. Further, Applicants' interpretation is consistent with the descriptions of other embodiments described with respect to Fig. 1, at col. 7, lines 29-43; Fig. 2, at col. 8, lines 1-5; Fig. 3, at col. 8, lines 27-32; and Fig. 4, at col. 9, lines 9-16.

For at least these reasons, Tang cannot reasonably be considered to teach or suggest all the features recited in independent claim 1. Independent claims 15 and 31 include features similar to those addressed above with respect to claim 1 and, therefore, Tang cannot reasonably be considered to teach or suggest all the features recited in independent claims 15 and 31 for at least the reasons addressed above with respect to claim 1. Claims 2-6, 9-14, 16-20, 23-30 and 32-40 depend from one of independent claims 1, 15 and 31 and, therefore, Tang cannot reasonably be considered to teach or suggest all the features recited in dependent claims 2-6, 9-14, 16-20, 23-30 and 32-40 for at least the reasons addressed above with respect to independent claims 1, 15 and 31 as well as for the additional features that claims 2-6, 9-14, 16-20, 23-30 and 32-40 recite.

B. Additionally, dependent claims 5-6, 23-24 and 32-34, as amended, recite features relating to the direction of the received gas flow that are clearly not taught or suggested by the applied prior art.

* * *

Accordingly, reconsideration and withdrawal of the rejection of claims 1-6, 9-20 and 23-40 under 35 U.S.C. §102(b) over Tang are respectfully requested.

II. §103 Rejection of Claims 7, 8, 21 and 22

The Office Action rejects claims 7, 8, 21 and 22 under 35 U.S.C. §103(a) as unpatentable over Tang. This rejection is respectfully traversed.

A. Tang Does Not Teach All Features Recited in Claims 7, 8, 21 and 22

Claims 7 and 8 depend from claim 1, and claims 21 and 22 depend from claim 15. As addressed above, Tang fails to teach or suggest all the features recited in independent claims 1 and 15. Therefore, Tang cannot reasonably be considered to teach or to suggest the combinations of features recited in claims 7, 8, 21 and 22.

B. Features of Claims 7, 8, 21 and 22

The Office Action acknowledges that Tang does not teach or suggest "placing the filter in motion at a rate of speed that is at least one of equal to and greater than a speed of the filtered air-flow scaled by a ratio of a filter pore average width to a filter pore average depth," as recited in claims 7 and 21, or "placing the filter in motion at a speed that is two to one-thousand times greater than a speed of the filtered air-flow scaled by a ratio of a filter pore average width to a filter pore average depth," as recited in claims 8 and 22. However, the Office Action asserts that the original specification does not provide sufficient support for these claims. This is incorrect.

For example, as described in the original specification at least at page 18, line 4 through page 20, line 4, the described filter is designed with a low concentration of filter material (e.g., filter fibers, filter elements, filter mesh), relative to the open spaces defined by the filter material through the filter. Further, an average cross-sectional area of defined open spaces through the filter material is typically greater than the average cross-sectional area of the smallest particles to be trapped by the filter. As a result of such a design, if the filter were to remain stationary, an air-flow across the filter would pass virtually unimpeded and few, if any, particles within the air-flow would impact the surface of the mesh of the filter and become trapped. In order for the described filter of the invention of claims 7, 8, 21 and 22 to effectively filter particles from an air-flow, the speed of the filter in motion should be sufficiently high so that the filter makes contact with, or impacts, particles of all sizes within

the filtered air-flow. In this manner, particles may adhere to a surface of the filter mesh, or pore, (e.g., a bar of a bar filter), become physically trapped by the filter material and/or be blocked or deflected by the filter, as the filtered air-flow passes through the filter.

As described in the original specification, at page 18, lines 1-8, equation EQ1 may be used to approximate a minimum filter speed relative to the speed of a filtered air-flow that assures, with high probability, that contact is established between the filter placed in motion and particles of any size located anywhere within the filtered airflow, thereby allowing particles within the air-flow to be removed with a high level of efficiency regardless of particle size.

These passages illustrate significance of features of claims 7, 8, 21 and 22. Additionally, the Office Action legally errs in its assertion that "the specification contains no disclosure of either the critical nature of these requirements or any unexpected results arising therefrom, and as such these requirements would be arbitrary and therefore obvious" (emphasis added).

Even if a showing of criticality or unexpected results is lacking, this is not by itself sufficient to establish obviousness. Rather, these are points that an Applicant may raise to rebut an obviousness-based rejection, once a *prima facie* case of obviousness has been made. See, e.g., MPEP §2144.05. In this case, however, the Office Action has not even established a *prima facie* case in the first instance.

Also, the MPEP explains that a showing of criticality, or unexpected results, "can rebut a *prima facie* case of obviousness based on overlapping ranges" (MPEP §2144.05, emphasis added). In other words, when the prior art discloses a range that overlaps the claimed range, then the applicant must show the criticality of the claimed range in order to rebut the *prima facie* case of obviousness established by that disclosure in the prior art. The Office Action has not even attempted to establish such overlapping ranges in the prior art.

Should the Office maintain its position that it need not first establish a *prima facie* case of obviousness to shift the burden to Applicants to show criticality, Applicants respectfully request citation of a rule or case supporting such position.

C. Summary

For at least the above reasons, it is respectfully submitted that Tang cannot reasonably be considered to teach or to suggest the combinations of features recited in claims 7, 8, 21 and 22 for at least the reasons addressed above with respect to claims 1 and 15, as well as for additional features that each of claims 7, 8, 21 and 22 recite.

Accordingly, reconsideration and withdrawal of the rejection of claims 7, 8, 21 and 22 under 35 U.S.C. §103(a) over Tang are respectfully requested.

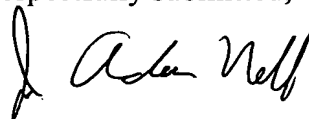
III. Conclusion

During the February 20 telephone conference with the Examiner, Applicants' representative asserted the above arguments. In response, Examiner Pham requested that the arguments be presented formally so that she may further consider the matter.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-40 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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